Test Type: CHRONIC **Route:** DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

Uterine section report with litter -- 0-300, 150-300

NTP Study Number: C20614

Lock Date: 01/10/2012

Cage Range: ALL

Date Range: ALL

Reasons For Removal: 25021 TSAC 25020 NATD 25019 MSAC

25016 Aborted

Removal Date Range: ALL

Treatment Groups: Include 004 0/300 ppm Include 006 150/300 ppm

Study Gender: Both

TDMSE Version: 2.5.0.0_sfh

PWG Approval Date: 07/25/2018

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

		Females	
DOSE	0/300 ppm	150/300 ppm	
Uterus (Standard Evaluation Adenoma	n)		
TUMOR RATES	#	#	
OVERALL (a)	1/50 (2%)	0/50 (0%)	
LITTERS (b)	1/29 (3%)	0/29 (0%)	
POLY-3 RATE (c)	1/41.88	0/41.44	
POLY-3 PERCENT (g)	2.4%	0%	
TERMINAL (d)	1/28 (4%)	0/32 (0%)	
FIRST INCIDENCE	744 (T)		
STATISTICAL TESTS			
POLY 3		P=0.502N	
POLY 1.5		P=0.503N	
POLY 6		P=0.497N	
RAO-SCOTT		P=0.579N	
LITTER C-A/FISHERS		P=0.500N	

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

		Females	
DOSE	0/300 ppm	150/300 ppm	
Uterus (Standard or Longitu Adenoma	udinal Evaluation)		
TUMOR RATES	#	#	
OVERALL (a)	1/50 (2%)	0/50 (0%)	
LITTERS (b)	1/29 (3%)	0/29 (0%)	
POLY-3 RATE (c)	1/41.88	0/41.44	
POLY-3 PERCENT (g)	2.4%	0%	
TERMINAL (d)	1/28 (4%)	0/32 (0%)	
FIRST INCIDENCE	744 (T)		
STATISTICAL TESTS			
POLY 3		P=0.502N	
POLY 1.5		P=0.503N	
POLY 6		P=0.497N	
RAO-SCOTT		P=0.579N	
LITTER C-A/FISHERS		P=0.500N	

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

		Females
DOSE	0/300 ppm	150/300 ppm
Uterus (Standard Evaluation) Carcinoma		
TUMOR RATES	#	#
OVERALL (a)	1/50 (2%)	2/50 (4%)
LITTERS (b)	1/29 (3%)	2/29 (7%)
POLY-3 RATE (c)	1/41.88	2/42.01
POLY-3 PERCENT (g)	2.4%	4.8%
TERMINAL (d)	1/28 (4%)	1/32 (3%)
FIRST INCIDENCE	744 (T)	564
STATISTICAL TESTS		
POLY 3		P=0.501
POLY 1.5		P=0.497
POLY 6		P=0.513
RAO-SCOTT		P=0.491
LITTER C-A/FISHERS		P=0.500

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

		Females	
DOSE	0/300 ppm	150/300 ppm	
Uterus (Longitudinal Evalua Carcinoma	ation)		
TUMOR RATES	#	#	
OVERALL (a)	5/50 (10%)	3/50 (6%)	
LITTERS (b)	5/29 (17%)	3/29 (10%)	
POLY-3 RATE (c)	5/42.06	3/42.01	
POLY-3 PERCENT (g)	11.9%	7.1%	
TERMINAL (d)	4/28 (14%)	2/32 (6%)	
FIRST INCIDENCE	695	564	
STATISTICAL TESTS			
POLY 3		P=0.356N	
POLY 1.5		P=0.362N	
POLY 6		P=0.339N	
RAO-SCOTT		P=0.342N	
LITTER C-A/FISHERS		P=0.353N	

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

DOSE	0/300 ppm	150/300 ppm
Uterus (Standard or Longitu	dinal Evaluation)	
Carcinoma		
TUMOR RATES	#	#
OVERALL (a)	5/50 (10%)	3/50 (6%)
LITTERS (b)	5/29 (17%)	3/29 (10%)
POLY-3 RATE (c)	5/42.06	3/42.01
POLY-3 PERCENT (g)	11.9%	7.1%
TERMINAL (d)	4/28 (14%)	2/32 (6%)
FIRST INCIDENCE	695	564
STATISTICAL TESTS		
POLY 3		P=0.356N
POLY 1.5		P=0.362N
POLY 6		P=0.339N
RAO-SCOTT		P=0.342N
LITTER C-A/FISHERS		P=0.353N

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

		Females	
DOSE	0/300 ppm	150/300 ppm	
Uterus (Standard Evaluation Carcinoma or Adenoma	n)		
TUMOR RATES	#	#	
OVERALL (a)	2/50 (4%)	2/50 (4%)	
LITTERS (b)	2/29 (7%)	2/29 (7%)	
POLY-3 RATE (c)	2/41.88	2/42.01	
POLY-3 PERCENT (g)	4.8%	4.8%	
TERMINAL (d)	2/28 (7%)	1/32 (3%)	
FIRST INCIDENCE	744 (T)	564	
STATISTICAL TESTS			
POLY 3		P=0.693N	
POLY 1.5		P=0.691	
POLY 6		P=0.681N	
RAO-SCOTT		P=0.665N	
LITTER C-A/FISHERS		P=0.694	

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

		Females	
DOSE	0/300 ppm	150/300 ppm	
Uterus (Longitudinal Evalua Carcinoma or Adenoma	ation)		
TUMOR RATES	#	#	
OVERALL (a)	5/50 (10%)	3/50 (6%)	
LITTERS (b)	5/29 (17%)	3/29 (10%)	
POLY-3 RATE (c)	5/42.06	3/42.01	
POLY-3 PERCENT (g)	11.9%	7.1%	
TERMINAL (d)	4/28 (14%)	2/32 (6%)	
FIRST INCIDENCE	695	564	
STATISTICAL TESTS			
POLY 3		P=0.356N	
POLY 1.5		P=0.362N	
POLY 6		P=0.339N	
RAO-SCOTT		P=0.342N	
LITTER C-A/FISHERS		P=0.353N	

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

		Females
DOSE	0/300 ppm	150/300 ppm
Uterus (Standard or Longitu Carcinoma or Adenoma	udinal Evaluation)	
TUMOR RATES	#	#
OVERALL (a)	5/50 (10%)	3/50 (6%)
LITTERS (b)	5/29 (17%)	3/29 (10%)
POLY-3 RATE (c)	5/42.06	3/42.01
POLY-3 PERCENT (g)	11.9%	7.1%
TERMINAL (d)	4/28 (14%)	2/32 (6%)
FIRST INCIDENCE	695	564
STATISTICAL TESTS		
POLY 3		P=0.356N
POLY 1.5		P=0.362N
POLY 6		P=0.339N
RAO-SCOTT		P=0.342N
LITTER C-A/FISHERS		P=0.353N

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

		Females
DOSE	0/300 ppm	150/300 ppm
Uterus (Standard Evaluation) Lymphoma		
TUMOR RATES	#	#
OVERALL (a)	1/50 (2%)	0/50 (0%)
LITTERS (b)	1/29 (3%)	0/29 (0%)
POLY-3 RATE (c)	1/42.38	0/41.44
POLY-3 PERCENT (g)	2.4%	0%
TERMINAL (d)	0/28 (0%)	0/32 (0%)
FIRST INCIDENCE	589	
STATISTICAL TESTS		
POLY 3		P=0.504N
POLY 1.5		P=0.505N
POLY 6		P=0.501N
RAO-SCOTT		P=0.589N
LITTER C-A/FISHERS		P=0.500N

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

DOSE	0/300 ppm	150/300 ppm
Uterus (Longitudinal Evalu Lymphoma	uation)	
TUMOR RATES	#	#
OVERALL (a)	1/50 (2%)	0/50 (0%)
LITTERS (b)	1/29 (3%)	0/29 (0%)
POLY-3 RATE (c)	1/42.38	0/41.44
POLY-3 PERCENT (g)	2.4%	0%
TERMINAL (d)	0/28 (0%)	0/32 (0%)
FIRST INCIDENCE	589	
STATISTICAL TESTS		
POLY 3		P=0.504N
POLY 1.5		P=0.505N
POLY 6		P=0.501N
RAO-SCOTT		P=0.589N
LITTER C-A/FISHERS		P=0.500N

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

		Females	
DOSE	0/300 ppm	150/300 ppm	
Uterus (Standard or Longitu Lymphoma	udinal Evaluation)		
TUMOR RATES	#	#	
OVERALL (a)	1/50 (2%)	0/50 (0%)	
LITTERS (b)	1/29 (3%)	0/29 (0%)	
POLY-3 RATE (c)	1/42.38	0/41.44	
POLY-3 PERCENT (g)	2.4%	0%	
TERMINAL (d)	0/28 (0%)	0/32 (0%)	
FIRST INCIDENCE	589		
STATISTICAL TESTS			
POLY 3		P=0.504N	
POLY 1.5		P=0.505N	
POLY 6		P=0.501N	
RAO-SCOTT		P=0.589N	
LITTER C-A/FISHERS		P=0.500N	

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

		Females	
DOSE	0/300 ppm	150/300 ppm	
Uterus (Standard Evaluation Polyp, Stromal	n)		
TUMOR RATES	#	#	
OVERALL (a)	4/50 (8%)	4/50 (8%)	
LITTERS (b)	4/29 (14%)	4/29 (14%)	
POLY-3 RATE (c)	4/42.06	4/41.81	
POLY-3 PERCENT (g)	9.5%	9.6%	
TERMINAL (d)	3/28 (11%)	3/32 (9%)	
FIRST INCIDENCE	695	638	
STATISTICAL TESTS			
POLY 3		P=0.641	
POLY 1.5		P=0.636	
POLY 6		P=0.632N	
RAO-SCOTT		P=0.619	
LITTER C-A/FISHERS		P=0.647	

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

Females						
DOSE	0/300 ppm	150/300 ppm				
Uterus (Longitudinal Evaluation) Polyp, Stromal						
TUMOR RATES	#	#				
OVERALL (a)	11/50 (22%)	13/50 (26%)				
LITTERS (b)	10/29 (34%)	11/29 (38%)				
POLY-3 RATE (c)	11/43.02	13/42.30				
POLY-3 PERCENT (g)	25.6%	30.7%				
TERMINAL (d)	9/28 (32%)	9/32 (28%)				
FIRST INCIDENCE	250	634				
STATISTICAL TESTS						
POLY 3		P=0.386				
POLY 1.5		P=0.377				
POLY 6		P=0.425				
RAO-SCOTT		P=0.391				
LITTER C-A/FISHERS		P=0.500				

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid **CAS Number:** 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

	Females					
DOSE	0/300 ppm	150/300 ppm				
Uterus (Standard or Longitudinal Evaluation) Polyp, Stromal						
TUMOR RATES	#	#				
OVERALL (a)	11/50 (22%)	13/50 (26%)				
LITTERS (b)	10/29 (34%)	11/29 (38%)				
POLY-3 RATE (c)	11/43.02	13/42.30				
POLY-3 PERCENT (g)	25.6%	30.7%				
TERMINAL (d)	9/28 (32%)	9/32 (28%)				
FIRST INCIDENCE	250	634				
STATISTICAL TESTS						
POLY 3		P=0.386				
POLY 1.5		P=0.377				
POLY 6		P=0.425				
RAO-SCOTT		P=0.391				
LITTER C-A/FISHERS		P=0.500				

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

Females						
DOSE	0/300 ppm	150/300 ppm				
Uterus (Standard Evaluation) Sarcoma Stromal or Polyp Stromal						
TUMOR RATES	#	#				
OVERALL (a)	4/50 (8%)	4/50 (8%)				
LITTERS (b)	4/29 (14%)	4/29 (14%)				
POLY-3 RATE (c)	4/42.06	4/41.81				
POLY-3 PERCENT (g)	9.5%	9.6%				
TERMINAL (d)	3/28 (11%)	3/32 (9%)				
FIRST INCIDENCE	695	638				
STATISTICAL TESTS						
POLY 3		P=0.641				
POLY 1.5		P=0.636				
POLY 6		P=0.632N				
RAO-SCOTT		P=0.619				
LITTER C-A/FISHERS		P=0.647				

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

Females					
DOSE	0/300 ppm	150/300 ppm			
Uterus (Longitudinal Evaluat	tion)				
Sarcoma Stromal or Polyp S	tromal				
TUMOR RATES	#	#			
OVERALL (a)	11/50 (22%)	13/50 (26%)			
LITTERS (b)	10/29 (34%)	11/29 (38%)			
POLY-3 RATE (c)	11/43.02	13/42.30			
POLY-3 PERCENT (g)	25.6%	30.7%			
TERMINAL (d)	9/28 (32%)	9/32 (28%)			
FIRST INCIDENCE	250	634			
STATISTICAL TESTS					
POLY 3		P=0.386			
POLY 1.5		P=0.377			
POLY 6		P=0.425			
RAO-SCOTT		P=0.391			
LITTER C-A/FISHERS		P=0.500			

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

Females						
DOSE	0/300 ppm	150/300 ppm				
Uterus (Standard or Longitudinal Evaluation) Sarcoma Stromal or Polyp Stromal						
TUMOR RATES	#	#				
OVERALL (a)	11/50 (22%)	13/50 (26%)				
LITTERS (b)	10/29 (34%)	11/29 (38%)				
POLY-3 RATE (c)	11/43.02	13/42.30				
POLY-3 PERCENT (g)	25.6%	30.7%				
TERMINAL (d)	9/28 (32%)	9/32 (28%)				
FIRST INCIDENCE	250	634				
STATISTICAL TESTS						
POLY 3		P=0.386				
POLY 1.5		P=0.377				
POLY 6		P=0.425				
RAO-SCOTT		P=0.391				
LITTER C-A/FISHERS		P=0.500				

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

	Females				
DOSE	0/300 ppm	150/300 ppm			
Vagina (Longitudinal Evaluation) Granular Cell Tumor					
TUMOR RATES	#	#			
OVERALL (a)	1/50 (2%)	1/50 (2%)			
LITTERS (b)	1/29 (3%)	1/29 (3%)			
POLY-3 RATE (c)	1/41.88	1/41.54			
POLY-3 PERCENT (g)	2.4%	2.4%			
TERMINAL (d)	1/28 (4%)	0/32 (0%)			
FIRST INCIDENCE	744 (T)	718			
STATISTICAL TESTS					
POLY 3		P=0.759			
POLY 1.5		P=0.757			
POLY 6		P=0.756N			
RAO-SCOTT		P=0.725			
LITTER C-A/FISHERS		P=0.754			

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

			Females	
DOSE	0/300 ppm	150/300 ppm		
Vagina (Standard or Longitu	dinal Evaluation)			
Granular Cell Tumor				
TUMOR RATES	#	#		
OVERALL (a)	1/50 (2%)	1/50 (2%)		
LITTERS (b)	1/29 (3%)	1/29 (3%)		
POLY-3 RATE (c)	1/41.88	1/41.54		
POLY-3 PERCENT (g)	2.4%	2.4%		
TERMINAL (d)	1/28 (4%)	0/32 (0%)		
FIRST INCIDENCE	744 (T)	718		
STATISTICAL TESTS				
POLY 3		P=0.759		
POLY 1.5	POLY 1.5			
POLY 6		P=0.756N		
RAO-SCOTT		P=0.725		
LITTER C-A/FISHERS		P=0.754		

Test Type: CHRONIC Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Perfluorooctanoic Acid CAS Number: 335-67-1

Date Report Requested: 09/16/2018 Time Report Requested: 18:23:46 First Dose M/F: 10/27/08 / 10/28/08

Lab: BAT

LEGEND

(2				examined at site.

- (b) Number of litters with tumor-bearing animals/number of litters examined at site
- (c) Number of tumor-bearing animals/Poly-3 number
- (d) Observed incidence at terminal kill.
- (e) Value of statistic cannot be computed.
- (f) Beneath the control incidence are the P-values associated with the trend test. Beneath the dosed group incidence are the P-values corresponding to pairwise comparisons between the controls and that dosed group.
- (g) Poly-3 adjusted lifetime tumor incidence.
- (I) Interim sacrifice
- (T) Terminal sacrifice
- # Tumor rates based on numbers of animals necropsied.
- * To the right of any statistical result, indicates significance at (P<=0.05).
- ** To the right of any statistical result, indicates significance at (P<=0.01).
- N Indicates a negative trend for all tests
 - The Rao-Scott statistic performs the Poly-3 test with an adjustment for within-litter correlation.

The Litter C-A/Fishers statistic compares directly the litter incidence rates.

*** END OF REPORT ***